

# ISO 19967-1:2019 (E)

## Heat pump water heaters — Testing and rating for performance — Part 1: Heat pump water heater for hot water supply

---

### Contents

	Foreword
1	Scope
2	Normative references
3	Terms and definitions
4	Symbols and abbreviated terms
5	Installation requirements
5.1	Test apparatus and uncertainties of measurement
5.2	Test room for the outdoor heat exchanger of air source heat pump water heaters
5.3	Installation and connection of the heat pump water heaters
5.4	Installation of heat pump water heater consisting of several parts
6	Settings and test conditions
6.1	General
6.2	Settings for non-ducted air source units
6.3	Setting the external static pressure difference for ducted air source units
6.4	Test conditions
6.4.1	General test conditions
6.4.2	Additional test conditions
7	Performance test and determination of the energy consumption
7.1	General
7.2	Basic principles
7.3	Off-peak products
7.4	Power input corrections
7.4.1	Power input of fans for heat pump water heater with duct connection
7.5	Stabilization [stage A]
7.6	Filling and storage [stage B]
7.7	Filling and heating up period [stage C]
7.8	Standby power input [stage D]
7.9	Water draw-offs and COP calculation [stage E]
7.9.1	Determination of the useful energy content
7.9.2	Determination of the energy consumption
7.9.3	Coefficient of performance (COPHW)
7.10	Reference hot water temperature and volume of mixed water at 40 °C [stage F]
7.11	Units with smart control
7.12	Temperature operating range
8	Test results and test report
8.1	Data to be recorded
8.2	Test report
8.2.1	General information
8.2.2	Main results
9	Marking
Annex A	(normative) Load profiles
Annex B	(informative) Determination of the smart control factor SCF

- B.1**        **General**
- B.2**        **Smart control test procedure**
- B.2.1**      **Measurement procedure**
- B.2.2**      **Installation**
- B.2.3**      **Stabilisation**
- B.2.4**      **Filling and heat-up**
- B.2.5**      **Stabilisation before reference period**
- B.2.6**      **Reference period**
- B.2.7**      **Smart period**
- B.2.8**      **Reporting of “Smart Control Factor” (SCF)**
- B.2.9**      **Check cycle**
- B.3**        **Calculation of COP<sub>smart</sub>**
- B.4**        **Test results and test report**
- B.4.1**      **Additional data to be recorded**
- B.4.2**      **Additional test results**

**Annex C (informative) Temperature operating range**

- C.1**        **Temperature operating range**

**Page count: 30**